



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND NORTHWEST
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EV3/SER 792

OCT 22 2012

Department of Ecology
Ms. Adrienne Dorrah
PO Box 47600
Olympia, WA 98504-7600

Dear Ms. Dorrah:

SUBJECT: NAVAL FACILITIES ENGINEERING COMMAND NORTHWEST
COMMENTS ON PROPOSED SEDIMENT MANAGEMENT STANDARDS

The Naval Facilities Engineering Command Northwest (NAVFAC NW) appreciates the opportunity to contribute to the revision process for the Sediment Management Standards (SMS), Chapter 173-204 Washington Administrative Code, and recognizes Ecology's efforts to clarify and streamline the rule. According to Ecology's public informational meetings, the goal of the new rule-making is to achieve faster sediment site cleanup. Some of the details of the proposed changes, however, may lengthen and complicate investigations, add cost to investigations and remedial actions, prevent selection of many beneficial remedial technologies, and delay response actions.

This letter includes a summary of some significant issues that NAVFAC NW recommends be addressed during the rule revision process. Clarification and additional specific comments are provided in Enclosure 1.

a. **Remedy Selection:** Cost and net environmental benefit should remain as criteria for remedial action selection. Potentially Responsible Parties (PRPs) want to make commitments that address their liability and achieve a sustainable environmental benefit. Sediment cleanup actions are best selected through consideration of all known, available, and reasonable technologies, and focus on accomplishing site-specific, attainable goals. Establishing a hierarchy of remedial actions independent of site-specific goals and conditions unnecessarily limits the selection process and may not allow for selection of the best remedial action for a site.

b. **Natural Background as the Cleanup Goal:** While restoring the environment to its pre-anthropogenically affected state is a worthy goal, it may not be reasonable, particularly in embayments with long and complex histories of human impact. PRPs in such embayments need a process for selecting attainable cleanup goals. Regional background is a more reasonable, attainable target than natural background in such embayments. The revised rule does not appear to address how an isolated PRP can achieve and maintain natural background levels in a site that is surrounded by impacted and unrestored sediments.

c. **Risk Reduction and Site Delisting:** Site delisting and expectations of how a sediment cleanup objective (SCO) can be met (over time), especially if the SCO is natural background, is major change to the SMS rule revision. There are no mechanisms in which to reach remedy completion without meeting the SCO. The SMS rule should contain mechanisms to allow for an achievable final cleanup action. Institutional controls should remain a viable remedy component. Access restrictions should be an acceptable form of risk reduction and should be an available remedy component to meeting cleanup objectives.

d. **Compliance Evaluation for Human Health:** Human health criteria and background values should be applied on an area-weighted basis. They are being derived to ensure the protection of human health (direct contact and seafood consumption pathways) and should match the exposure area of concern (usually larger exposure areas). The SMS rule should clarify that these values are NOT applied on a point-basis.

e. **Inability to Evaluate Impact of Rule Change:** The new rules refer to technical support information that is not currently established or is currently being changed. For example, regional backgrounds have not been established, and fish consumption rates are being re-worked in parallel but separately from this rule. Determining the effect of the new rule is difficult without knowing what these values will be. We recommend that the rule not be promulgated with dependence on rules or processes that are not yet established, peer reviewed, or transparent.

I recognize the effort that Ecology has put into the development of the rule revision. I also understand that sediment management is inter-related to both environmental cleanup actions and shoreline and surface water compliance efforts. This makes rule revision and implementation difficult.

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Our comments are submitted with the intent of supporting your revision process and preventing unintended delays or disruptions to ongoing efforts to reduce risks to human health and the environment.

The technical point of contact for these comments is Ms. Ellen Brown. She can be reached by telephone at 360-396-0070 or by email at Ellen.brown1@navy.mil.

Sincerely,

A handwritten signature in cursive script, appearing to read "Dina R. Ginn".

Dina R. Ginn, FE
Environmental Restoration Manager

Enclosure: 1. NAVFAC NW Comments to 2012 Sediment Management Standards Revisions

NAVFAC NW Comments to 2012 Sediment Management Standards Revisions

#	SMS Section	Comment
1	WAC 173- 204-560 Lines 2196-2201	We appreciate the efforts to streamline the SMS cleanup standard selection process, but the proposed language change, “may be adjusted upwards from the SCO based on “ <u>technically possible...</u> and adverse environmental impacts,” does not acknowledge the complexities and uncertainties of working in a water environment. The net environmental benefit and the cost of the cleanup should be considered. We strongly encourage Ecology to modify the language and incorporate technical practicability and net environmental benefit into the selection process. The original selection criteria of cost, technical feasibility and net environmental benefit seemed more supportive of a sustainable process that allows for site-specific evaluation based on risk and best available technologies. The old rule stating “the cleanup level will be selected within the allowable range between the SQS and CSL and be as close as practicable to the cleanup objective” was acceptable as written.
2	WAC 173-204-560 & 561, Lines 2216 – 2230, 1537 - 1559	<p>a. We support the concept of a two-tiered evaluation for both ecological and human health. However, the lower end of the range (sediment cleanup objective [SCO]) likely represents a cleanup level goal that may not be attainable. The upper end of the range (cleanup screening level [CSL]) needs to be implementable and practicably achievable. Establishing a reasonable range from which to set a site-specific cleanup level supports early cleanup actions and effective progression toward the Sediment Cleanup Objective in the long term. We recommend that changes to the CSL consider the following:</p> <ul style="list-style-type: none"> i. 10-5 Risk. The draft rule revisions indicate that Human Health Seafood Consumption Criteria by default will be based on tribal subsistence-level fish consumption rates. Using these rates, a total site risk of 10^{-5} may be impractical to meet regardless of the remedial action taken for many human health (HH) contaminants. The human health risk range should match the acceptable CERCLA risk range of 10^{-6} to 10^{-4} risk, especially for certain chemicals. The CSL should be set to 10^{-4} risk, or at a minimum allow flexibility for chemical- or site-specific evaluations. Alternatively, a 10^{-5} risk should be calculated for other endpoints such as recreational consumers, and used as the upper end of the range. ii. Hazard Quotients. The draft rule revisions recommend an HQ of 1 for non-cancer risks. This effectively eliminates the usefulness of a tiered approach, because the SCO is set to the same risk level. We recommend an HQ >1, based on a range of seafood consumption rates that include recreational (occasional) fishing (otherwise there is no difference between the CSL and the Sediment Cleanup Objective). iii. Selected HH Contaminants. We are concerned that the list of SMS chemicals derived for the protection of benthic toxicity will be interpreted to also apply to human health. The SMS rule revisions should acknowledge that the Human health criteria only apply to a subset of bioaccumulative contaminants. <p>b. Line 1537-1559. From Figure 1, it would seem that the sediment cleanup level could be adjusted upward from the numerical criteria listed for the SCO in Table IV based on site specific risk assessment results (e.g. toxicity tests, human health food web modeling) and background considerations. The text in this section, however, states that the SCO can only vary from those values listed on Table IV based on technical feasibility and adverse environmental impacts. This process is not clearly defined or transparent and needs to be</p>

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		<p>clarified.</p> <p>c. Because the SCO, as the “default” sediment cleanup level, only considers natural background (defined as concentrations that have not been influenced by localized human activity; Line 330), this essentially eliminates regional background (defined as inclusive of anthropogenic background; Line 389) considerations from the development of the sediment cleanup level and the site remediation process. This will result in sediment cleanup levels being developed that do not account for anthropogenic background concentrations, such as diffuse non-point sources and storm water inputs. This may increase the extent of sediment remediation without consideration for the benefits of the remediation process to the embayment.</p>
	WAC 173-204-530, Line 1775 – 1791 (listing), and 1793 – 1812 (delisting)	<p>a. Site delisting and expectations of how a sediment cleanup objective (SCO) can be met over time, especially if the SCO is natural background, is major change to the SMS rule revision. There are no mechanisms to reach remedy completion without meeting the SCO. The SMS rule should contain mechanisms to allow for an achievable final cleanup action. We also believe that Institutional Controls (ICs), when combined with active remedies, should be acceptable for meeting cleanup objectives.</p> <p>b. Lines 1795 – 1798, Condition (6)(a)(i) for delisting implies that sites can no longer be delisted until all confirmational monitoring has been completed, all actions in the cleanup action plan have been completed, and all sediment cleanup standards have been achieved. Completing a cleanup action and achieving cleanup standards is not sufficient for delisting. It must be demonstrated that the remedial technology is performing as intended. This is typically done during 5-year reviews. There is concern that a federal site may be delisted under CERCLA, but remain listed under the WAC.</p>
3	WAC 173-204-500, Line 1548	Line 1548 says “sediment cleanup objectives can be met through a combination of cleanup action and source control.” This may take an incredibly long-time and may be unachievable especially in urban environments with diffuse non-point sources. The rule and guidance needs to include a workable solution. Please add “Institutional Controls” to the statement. ICs should remain a viable remedy component. Access restrictions should be an acceptable form of risk reduction and should be an available remedy component to support meeting cleanup objectives. This is consistent with MTCA.
4	WAC 173-204-500, Line 1494	The proposed rule revisions regarding “recontamination after remediation will not be the responsibility of the entity that conducted the cleanup” support early action and faster cleanups. However, the process of determining the source, extent, and impact of recontamination may be difficult. It may require many years of data collection and analysis. How will recontamination of a site above anthropogenic backgrounds located outside of the control of the PRP be handled in cleanup decisions and site complete determination? How will compliance monitoring be used to determine achievement of the cleanup level?
5	WAC 173-204-560, Line 2355	The Navy has several concerns regarding the universal application of tribal subsistence consumption rates as the default maximum exposure scenario. What is meant by “historic” tribal use of fish and shellfish in the general vicinity of the site? Can the consumption rates be adjusted based on food availability? Is the MTCA human health risk scenario also applicable? We recommend that Ecology not promulgate a rule for managing contaminated

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		sediments based on tribal consumption when the technical details of applying fish consumption data haven't been resolved.
6	WAC 173-204-560, Line 2275	Human health criteria and background values should be applied on an area-weighted basis. They are being derived to ensure the protection of human health (direct contact and seafood consumption pathways) and should match the exposure area of concern (usually larger exposure areas). The SMS rule should clarify that these values are NOT applied on a point-basis. In addition, one of the requirements of a cleanup action is to comply with the cleanup standards specified in 560. Please clarify to the basis for meeting compliance with these values.
7	WAC 173-204-200 (27) and (38), Lines 330- 340, and 389 - 393	<p>a. In defining "natural background" the term "localized human activities" is used. This term should be defined. It is somewhat unclear how natural background and regional background are differentiated, and which anthropogenic effects are admissible and which are not.</p> <p>b. In defining regional background, how might background for a particular embayment be determined if it has been anthropogenically affected for many generations? If Ecology assumes the responsibility for determining background levels for many embayments of Puget Sound, then the selection process, including the treatment of data and any outliers should be a transparent and peer-reviewed process.</p> <p>c. Who will be financially and technically responsible for determining natural background and regional background? In what part of the remedial process will this occur?</p> <p>d. What is the projected timeline for establishing natural background and regional background? How will the department handle schedule impacts on remedial process in the embayments where these aren't established yet?</p> <p>e. If a PRP must assume the responsibility of collecting reference data and calculating background values for their sites, how will Ecology ensure consistency between projects?</p>
8	WAC 173-204-570, Lines 2920 and 2987	<p>a. We understand that MTCA states "use permanent solutions to the maximum extent practicable", however, ranking and hierarchy described in the proposed rule for long-term effectiveness seems inappropriate. It places a biased preference for dredging and does not allow for balancing the criteria of short-term effects, long-term benefits, and costs. The selection of the remedy and technologies should continue to be evaluated based on net environmental benefit, technical practicability, and costs. The methodology for choosing remedial alternatives ensures that all possibilities are considered, as appropriate for each site. The Proposed SMS's prioritized listing of preferred alternatives is not connected to relevant site conditions or risk, and can thereby work in opposition to findings of the RI/FS. If the proposed SMS hierarchy supplants a balanced discussion about the pros and cons of each technology, creative solutions may be missed. There is no one best technology for the remediation of contaminated sediments.</p> <p>b. Line 2987 states "unless otherwise determined by the department, cleanup actions that achieve compliance with the sediment cleanups</p>

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		<p>standards at a site or sediment cleanup unit within ten years from the start of the cleanup action shall be presumed to have a reasonable restoration time frame". We believe that the restoration time frame should be ten years AFTER the cleanup action. Also, different time frames may need to be established for biological and HH endpoints, especially for cleanup levels based on background.</p> <p>c. Will sediment recovery zones be applied at larger (bay-wide) scales where there have not been identified point sources but sediment concentrations are still above natural background levels?</p> <p>d. How do you define where and how a technology is technically possible, especially dredging?</p>
9	General	The rules as proposed may put a burdensome level of cost and complexity into risk evaluation of small sites.
10	WAC 173-204-200, Lines 510, 2193, 2262	Please further clarify the terms cleanup screening level (CSL), sediment cleanup level, sediment cleanup objective (SCO) and sediment cleanup standard (SCS), including providing more detail as to the intent of how these values will be employed in the 2-tier framework and throughout the site remediation process, including site identification, hazard ranking, identification if smaller site units within a larger site, compliance with remediation levels, and site closure. The document does not present a clear and transparent process that specifically details how these values are utilized throughout the site remediation process.
11	WAC 173-204-500, Line 1501	The new draft rule requires that "the sediment component of sites and sediment cleanup units with limited contamination will be restored within a single construction season using active cleanup actions such as dredging or capping. However, the department recognizes that longer restoration time frames may be necessary at sites with more extensive or widespread contamination, including sites with ubiquitous chemicals from numerous point and non-point sources." Upon what quantitative basis will this determination be based? How will fish windows, with their narrowly limiting time frames for construction, be incorporated into this decision? This is a design issue and the restriction may conflict with the requirements of Endangered Species Act. Because of the limited 3.5 month in-water work windows in Puget Sound, it may be difficult to implement cleanup work in one work season. In addition, this statement biases the rule toward quicker cleanups instead of better, more protective cleanups that minimize short-term risks. The restriction should be removed from the rule.
12	WAC 173-204-500, Line 1482	<p>a. Line 1482, Scale of Cleanups, the proposed rule states that the cleanup may include "use of source control measures to minimize future contamination". How will the new rules also impact NPDES permitting and compliance? If not, how can PRPs know their sites will not be re-contaminated by point source dischargers?</p> <p>b. Does Ecology anticipate changing other environmental regulations to bring them into support and compliance with the new rules? If natural background is the goal for each embayment, how will pollutant loadings for surface runoff and point source dischargers be set to support that? What</p>

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		<p>about other compliance regulations?</p> <p>c. How will the rule changes affect upland cleanup standards and site closures?</p>
13	General	<p>The cost-benefit analysis regarding the potential effects of rule changes to sediment cleanup projects in Washington State only compares between the SCO and CSL cleanup levels. The evaluation should also include a “no action” or baseline scenario (the existing SMS rule revisions). The analysis should compare the cost burden of incorporating HH criteria into the rule revision.</p>
14	General	<p>We would like to see the cost impacts of the rule changes evaluated in compliance with SEPA. We believe an accurate cost evaluation cannot be completed until unknowns (such as fish consumption, regional and natural background, and connections to other regulations that implementation of these rules are dependent upon) have been fully identified and resolved.</p>
15	WAC 173-204-562, Line 2591-2600	<p>The revisions in Table V confuse the assessment because, while all of the other SCOs are consistent with the sediment quality standards of Section 320, determination of statistically significant differences in larval survival and development is at a probability level of 0.1 ($p=0.1$). This results in a slightly higher likelihood that larval effects will be determined under the revised rule. The Department of Ecology <i>Review of Sediment Management Standards – Bioassay Protocols</i> (1995) specifies $p=0.05$. This discrepancy between sediment quality standards and previous department recommendations should be explained.</p>
16	WAC 173-204-540, Lines 1881-1889	<p>The determination of Applicable or Relevant and Appropriate Requirements (ARARs) is an important part of the CERCLA process. ARARs are identified and agreed as applicable or relevant and appropriate on a site-specific basis. The proposed rule change should not state the Rule in its entirety will be an ARAR for federal cleanups.</p>
17	WAC 173-204-200, Lines 327-329	<p>The proposed definition of Monitored Natural Attenuation spells out what kind of monitoring will occur (sediment quality, tissue, <u>and</u> biota). Please change "and" to "or", to allow project teams to determine which types of monitoring would be best for the needs of the site.</p>